

WHAT IS CLAIMED IS:

1. A light source used for a projector for modulating a light irradiated from a source lamp to form an optical image in accordance with image information and enlarging and projecting the optical image, comprising:

a source lamp;

a reflector for aligning and emitting the light irradiated from the source lamp; and

a case for accommodating the source lamp and the reflector,

wherein a light-emitting surface of the reflector is covered by a light-transmissive plate and a pair of openings is formed on a contact surface of the light-transmissive plate and the reflector, the pair of openings being symmetrically disposed around an optical axis of the reflector, and

wherein the case includes a cooling channel for introducing a cooling air to the source lamp through the pair of opening and a cooling channel shutter for shutting the cooling channel when the case is detached from the projector and for opening the cooling channel shutter when the case is attached to the projector.

2. The light source according to claim 1, wherein the pair of opening is a recess formed on the distal part of the reflector in the light-emitting direction.

3. The light source according to claim 1, wherein the pair of opening is horizontally disposed when the case is detached from the projector.

4. The light source according to claim 1, wherein the cooling channel shutter includes a lid member rotatably supported to the case for shutting the opening formed on the case and a biasing member for biasing the lid member in rotary direction.

5. The light source according to claim 1, wherein the cooling channel shutter includes a lid member slidably supported by the case for shutting an opening formed on the case and a biasing member for biasing the lid member in slide direction thereof.

6. The light source according to claim 1, wherein the case is provided with a duct for guiding an air from an outside of the case to the cooling channel and/or from the

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cooling channel to the outside of the case.

7. The light source according to claim 1, wherein a dust filter is provided on the pair of openings.

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8. A projector comprising a light source according to any one of claims 1 to 7.

9. The projector according to claim 8, further comprising a duct having an end inserted to the cooling channel shutter while being attached to the light source for introducing the cooling air into the light source.

10. The projector according to claim 9, wherein a fan for transferring the cooling air is provided on the base end of the duct.

15 11. The projector according to claim 9, further comprising an exhaust duct for discharging the air having cooled the inside of the light source, the base end of the duct being connected to the exhaust duct.

20 12. The light source according to claim 8, wherein the pair of opening is a recess formed on the distal part of the reflector in the light-emitting direction.

13. The light source according to claim 8, wherein the pair of opening is horizontally disposed when the case is detached from the projector.

25 14. The light source according to claim 8, wherein the cooling channel shutter includes a lid member rotatably supported to the case for shutting the opening formed on the case and a biasing member for biasing the lid member in rotary direction.

30 15. The light source according to claim 8, wherein the cooling channel shutter includes a lid member slidably supported by the case for shutting an opening formed on the case and a biasing member for biasing the lid member in slide direction thereof.

16. The light source according to claim 8, wherein the case is provided with a duct

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for guiding an air from an outside of the case to the cooling channel and/or from the cooling channel to the outside of the case.

17. The light source according to claim 8, wherein a dust filter is provided on the pair
5 of openings.

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